Guide to Installation & Operations

12/16 Watt Cabin Light Assembly
Model #: CL12WXY-31/-32/-33
CL16WXY-31/-32/-33

Document #540159

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Revision History

Rev. Level	Date	Description
IR	7/99	Initial Release

Applicable Documents

Document #	Drawing #	Description
N/A	522208	Cabin Light, 12/16 Watt w/Internal Fan, 26VAC

Service Bulletin List

Service Bulletin #	Subject	Manual Revision #	Manual Revision Date

List of Illustrations

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MODEL NO.
CL12/16WXY-31/-32/-33 Series
12/16 Watt Cabin Light Assembly

1.0 General Information

1.1 Introduction

This manual contains information for the installation and operation of the Audio International, Inc. (AI) 12 and 16 Watt Cabin Light Assembly for aircraft use, Model # 's CL12WXY-31/-32/-33 and CL16WXY-31/-32/-33. Information within this publication includes relative physical, mechanical, and electrical characteristics. Also included within this publication are additional references needed for installation and operation.

1.2 Purpose of the Equipment

The CL12WXY-31/-32/-33 and CL16WXY-31/-32/-33 are halogen reading lights that contain an internal fan for cooling purposes. The brilliant halogen bulb delivers maximum color-correct illumination with the beam specially focused for even light intensity and comfortable viewing. The light assemblies are built to rugged aircraft standards and are easily incorporated into new or existing lighting systems.

Specific model numbers and their descriptions can be interpreted as follow:

Model No.	Description
CL	Stands for Cabin Lighting
12 or 16 W	Indicates the wattage of light bulb
X	Indicates the mounting type: #4 for square mount, #3 for round mount
Y	Indicates trim ring: #0 for no trim ring, #5 for trim ring
-31	Indicates models supplied with a DEMA-9P connector
-32	Indicates models supplied with a 350767-1 3-pin Amp receptacle
-33	Indicates models supplied with a 1-640507-0 2-pin Amp plug
Example: CL12W35-31 = 12 watt, round mount cabin light with trim ring and DEMA-9P connector.	

1.3 Operational Features

Raised trim ring provides easy grip for positioning. An internal cooling fan keeps light touchable and extends halogen bulb life. A forty-two degree swivel range provides approximately 1.5 feet circle of beam adjustment at 2 feet.

1.4 Optional Equipment

Available from Audio International, Inc. is a Cabin Light Bulb Replacement Kit, CLxxWSK-5. This simple kit contains five spare halogen bulbs and the special tool needed to access AI's CL series cabin light. It is time saving, convenient and stores easily on any aircraft. The "xx" in the model number denotes the bulb wattage needed-12 or 16 watt.

2.0 Installation

2.1 Prior to Installation

The CL12/16WXY-31/-32/-33 are simple lighting units to install and use. The units must be attached to conform to the standards designated by the customer, installing agency, and existing conditions as to the unit location and type of installation. The following should be carefully considered before installing:

2.1.1 Select a mounting location for the unit where 26 VAC/28 VDC power has been previously installed (Depending upon configuration). The lighting assembly can be mounted in any location that will allow the unit to connect with the aircraft lighting system.

2.1.2 The selected location must have an opening prepared for the unit to be inserted and mounted. Refer to section 5.0 for unit dimensions and mounting hole locations.

2.2 Unpacking & Inspection

2.2.1 Carefully open the packaging and remove the Lighting Assembly. Verify that all components have been included in the package per the packing list. Inspect the unit for damage. Retain the packing materials and packing list.

If damage has occurred during shipping, a claim must be filed with AI within 24 hours and a "Return Request Authorization Number" must be obtained from AI. Refer to the front cover of this manual for address and telephone number of Audio International. Repackage the unit in its original packaging materials and return it to AI following instructions given by the AI representative. If no return is necessary, retain the packing materials for storage or reshipment if necessary.

2.3 Cautions & Warnings

2.3.1 Avoid placing cables too near high power wires. Perform a pin-to-pin check to confirm that all wires terminate in their proper location. It is important to do a power and ground check on the pin connections. Ensure that power and ground are applied only where required.

2.3.2 **DO NOT** connect or disconnect the assembly while power is applied.

2.3.3 **DO NOT** remove any factory-installed screws. Damage to the unit may result and void any warranties.

2.4 Wiring Requirements

2.4.1 The installing agency must supply and fabricate all external cables. The length and routing of external cables must be carefully studied and planned before attempting installation of the equipment. Allow adequate space for installation of cable and connectors. Avoid sharp bends and placing cables near aircraft control cables. Maintain a minimum clearance of three (3) inches from any control cable. If wiring is run parallel to combustible fluid or oxygen lines, maintain a separation of six (6) inches between the lines.

2.4.2 All power and ground wires must be 20 AWG minimum. All wires must be in accordance with MIL-W-22759 or equivalent. Twisted, shielded cable must be in accordance with MIL-W-27500 or equivalent. Protect power wires with circuit breakers or fuses located close to the electrical power source bus.

2.5 Physical Requirements

2.5.1 Refer to Section 5.1 for unit dimensions.

2.6 Electrical Connections

2.6.1 Refer to section 1.2 to determine the connector supplied with the unit.

2.6.2 Refer to section 2.7 to determine pin connections as well as the lighting options supplied with the unit.

2.7 Pinouts / Descriptions

Config.	Lighting Option	Pin #	Description
-31	Single button On/Off control	1	26 VAC
		2	Ground
-32	Single button On/Off control	1	N/C
		2	Ground
		3	26 VAC
-33	Single button On/Off control	1	26 VAC
		2	Ground

2.8 Connector / Mating Connector Information

Config.	Connector	Mating Connector
-31	DEMA-9P Female Screw Lock	DEMA-9S Male Screw Lock
-32	3-Pin Amp Receptacle	3-Pin Amp Plug
-33	2-Pin Amp Plug	2-Pin Amp Receptacle

2.9 Post Installation Test

2.9.1 With the aircraft power ON, verify all reading/table lights installed are operational.

3.0 Operations

All units have a single toggle switch to activate/deactivate the unit. Press the switch button to activate the unit to the “ON” position; press the switch button a second time to deactivate to the “OFF” position.

4.0 Troubleshooting

4.1 If difficulties arise in the installation or operation of the unit, connect Audio International, Customer Service for assistance.

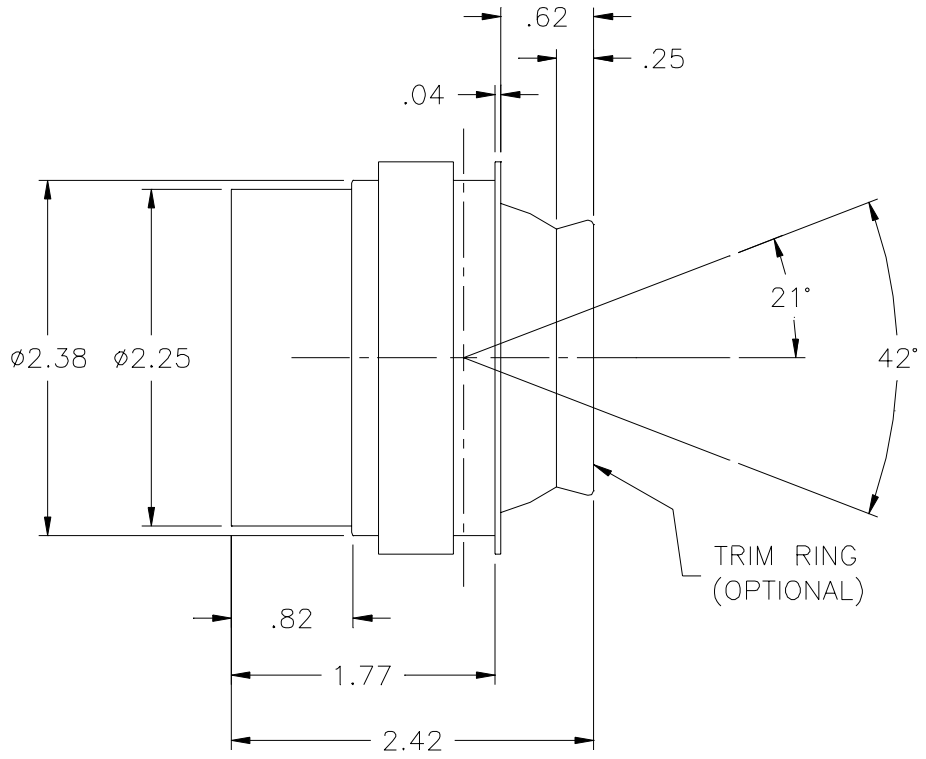
5.0 Specifications and Drawings

5.1 Unit Specifications

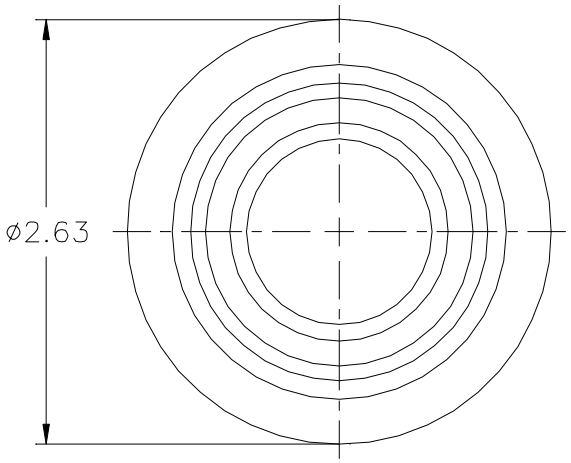
Physical Specifications	
Dimensions	Length-2.42", width-2.63", height-2.38"
Weight	Approximately 0.35 lbs./ .17 kg.

Electrical Specifications	
Power	28 VDC nominal 12W = 500mA 16W = 600mA
POWER NOTE: Model CL12/16W35-xx	26 VAC nominal 12W = <500mA 16W = <600mA

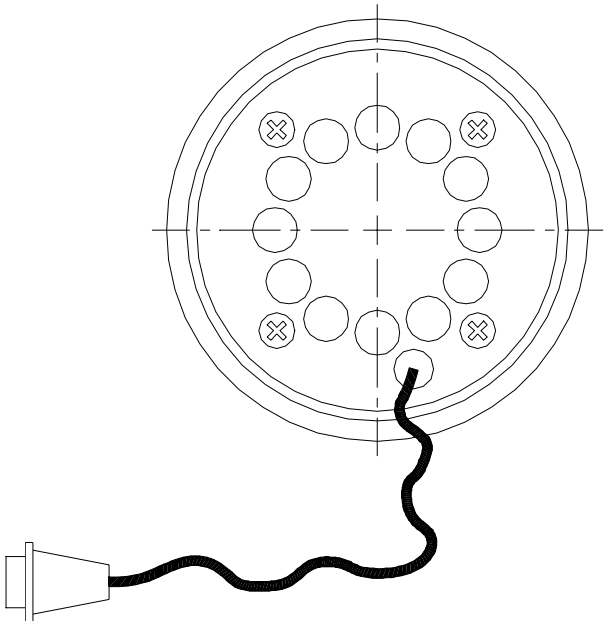
5.2 The following diagram shows the unit dimensions of the round light assembly.



ROUND MOUNT

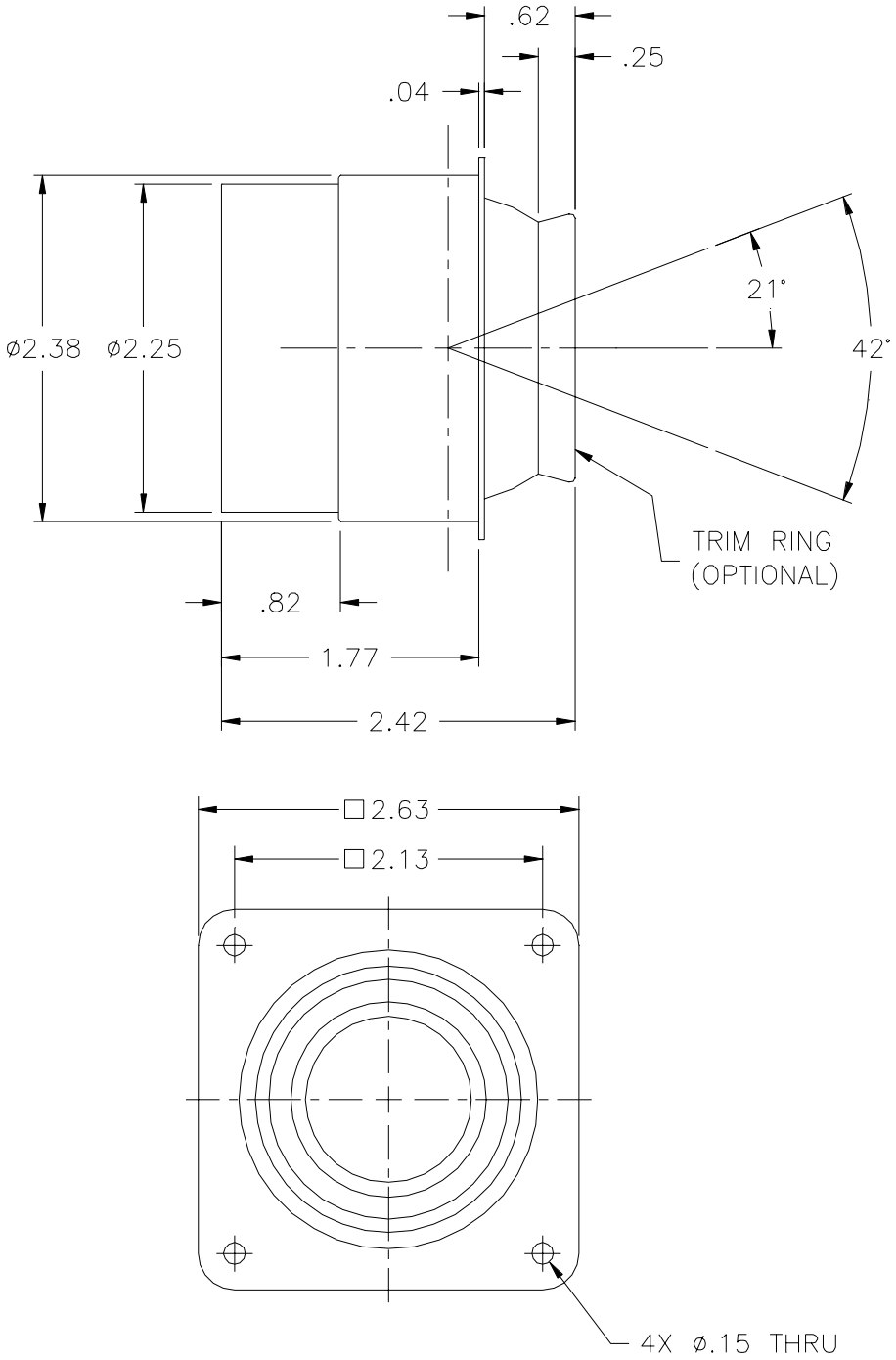


ROUND MOUNT-FRONT VIEW

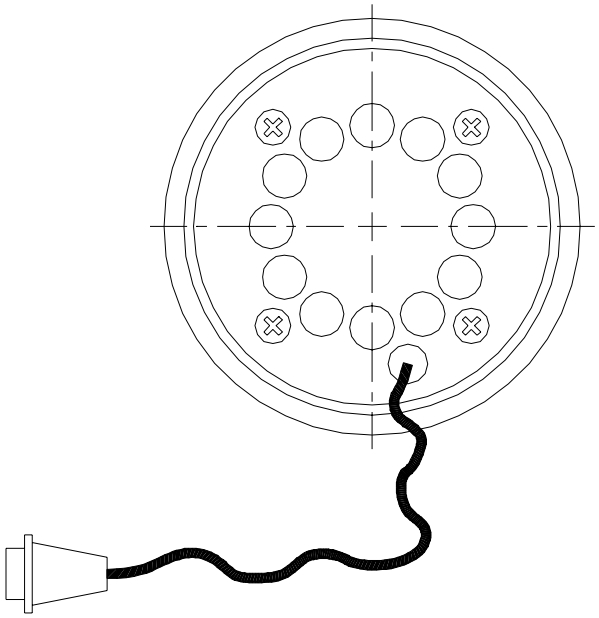


ROUND MOUNT-REAR VIEW

5.3 The following diagram shows the unit dimensions of the square light assembly.



SQUARE MOUNT-FRONT VIEW



SQUARE MOUNT-REAR VIEW